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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,800	02/14/2008	Jerome Samson	20004/221US	5837
81905	7590	01/30/2009		
Hanley, Flight & Zimmerman, LLC 150 S. Wacker Dr. Suite 2100 Chicago, IL 60606			EXAMINER	
			LU, KUEN S	
			ART UNIT	PAPER NUMBER
			2169	
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			01/30/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/576,800	<b>Applicant(s)</b> SAMSON ET AL.	
	<b>Examiner</b> KUEN S. LU	<b>Art Unit</b> 2169	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,7-9,11,12,16,17,19,22-24,26,27 and 31-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,7-9,11,12,16,17,19,22-24,26,27 and 31-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/21/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/13,27/2007</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. The Action is responsive to Applicant's Application filed March 28, 2007.
2. Please note claims 1-2, 4, 7-9, 11-12, 16-17, 19, 22-24, 26-27 and 31-34 are pending.

### ***Drawings***

3. The drawings, filed March 28, 2007, are considered in compliance with 37 CFR 1.81 and accepted.

### ***Information Disclosure Statement***

4. The information disclosure statement (IDS) submitted on March 13 and 27, 2007 were filed before the mailing of a first Office action after the filing of the application. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

- 5.1.** Claims 1-2, 4, 7-9, 11-12, 16-17, 19, 22-24, 26-27 and 31-34 are rejected are

rejected under U.S.C. 103(a) as being unpatentable over **Sato et al.**: “ASSOCIATION CANDIDATE GENERATING APPARATUS AND METHOD, ASSOCIATION-ESTABLISHING SYSTEM, AND COMPUTER-READABLE MEDIUM RECORDING AN ASSOCIATION CANDIDATE GENERATING PROGRAM THEREIN”, U.S. Patent Application publication **2003/0182296**, filed October 29, 2002, and published September 25, 2003, hereafter “Sato”; and in view of **Eftink**: “DATABASE CORRELATION METHOD”, U.S. Patent 6,370,547, filed April 27, 1999, and issued April 9, 2002.

**As per claim 1**, Sato teaches a method of fusing first and second datasets, comprising:

“determining a ranking of a plurality of matching variables associated with the first and second datasets” (See Abstract and [0096] where attributes from data sources are calculated, compared, and ranked).

Sato does not explicitly teach “generating a hierarchical matching grid including a plurality of levels based on the ranking of the plurality of matching variables”.

However, Eftink teaches creating hierarchical levels of confidence to differ degrees of data similarity between databases (See col. 5, lines 38-56).

It would have been obvious to one having ordinary skill in the art at the time of the applicant’s invention was made to combine the teaching of Eftink with Sato reference by using hierarchical structure to house rankings of matching attributes of database because the combined teaching would have enabled Sato’s system to generate candidates for associating information sources.

The combined teaching of Eftink and Sato references further teaches the following:  
“identifying first and second sets of match candidates from the first and second datasets based on one of the plurality of levels of the hierarchical matching grid” (See Sato: Abstract and [0096] where attributes from data sources are calculated, compared, and ranked, and ); and  
“fusing records in the first and second sets of match candidates based on probabilities associated with the records” (See Eftink: Abstract where algorithms are implemented to identify duplicative information and to correlate higher confidence and selected primary information in distributed databases).

**As per claim 16**, the claim is directed to a system for fusing first and second datasets of claim 1 and therefore rejected along the same rationale.

**As per claim 31**, the claim is directed to a machine readable medium having instructions stored thereon for performing functions of claim 1 and therefore rejected along the same rationale.

**As per claims 2, 17 and 32**, the combined teaching of Eftink and Sato references further teaches “wherein determining the ranking of the plurality of matching variables includes ranking the plurality of matching variables based on a relative strength of a relationship between each of the matching variables and a respondent characteristic” (See Sato: [0092] and [0068] where similarity of a pair of associated attributes is

calculated based on different types of attributes characteristics).

**As per claims 4, 19 and 33**, the combined teaching of Eftink and Sato references further teaches “wherein generating the hierarchical matching grid including the plurality of levels based on the ranking of the plurality of matching variables includes generating a series of binary values so that each of a plurality of bit positions associated with the binary values uniquely corresponds to one of the plurality of matching variables” (See Eftink: col. 6, lines 4-24 where attributes characteristics are compared by using index value which teaches binary and bit positions comparison).

**As per claims 7, 22 and 34**, the combined teaching of Eftink and Sato references further teaches “wherein the generating the hierarchical matching grid including the plurality of levels based on the ranking of the plurality of matching variables includes generating the hierarchical matching grid to allow skewed matching on one or more of the matching variables” (See Eftink: col. 4, lines 10-19 where curvilinear approximation is closely defined to approximate an irregular shape associated with an identifier teaches skewed matching of attributes).

**As per claims 8 and 23**, the combined teaching of Eftink and Sato references further teaches “wherein generating the hierarchical matching grid including the plurality of levels based on the ranking of the plurality of matching variables includes establishing a minimum matching level” (See Eftink: col. 5, lines 38-56 where data tolerances are

utilized to established difference levels of confidence, including a first and higher which teaches a minimum matching level).

**As per claims 9 and 24**, the combined teaching of Eftink and Sato references further teaches “wherein identifying the first and second sets of match candidates from the first and second datasets based on the one of the plurality of levels of the hierarchical matching grid includes using match criteria from the one of the plurality of levels of the hierarchical matching grid to identify records in the second dataset that match records in the first dataset on ones of the plurality of matching variables defined by the match criteria” (See Sato: [0092] and [0068] where similarity of a pair of associated attributes is calculated based on different types of attributes characteristics, and Eftink: col. 5, lines 38-56 where data tolerances are utilized to established difference levels of confidence).

**As per claims 11 and 26**, the combined teaching of Eftink and Sato references further teaches “wherein fusing the records in the first and second sets of match candidates based on the probabilities associated with the records includes establishing the probabilities based on weights associated with records from at least one of the first and second sets of match candidates” (See Sato: Fig. 3 and [0090] where attributes values at different data sources are evaluation to see if they are the same to establish probability whether that the match attributes are the same).

**As per claims 12 and 27**, the combined teaching of Eftink and Sato references further teaches the following:

“comparing a first sum of weights associated with the first set of match candidates with a second sum of weights associated with the second set of match candidates” (See Sato: [0084] where the similarity calculation of attributes is performed based on the combination, to an efficient degree, of attribute types of attribute);

“identifying one of the first and second sets of match candidates as overweight based on the comparison of the first and second sums of weights” (See Sato: [0084] where the similarity calculation of attributes is performed based on some extracted features); and

“trimming records of one of the first and second sets of match candidates identified as overweight prior to fusing the records in the first and second sets of match candidates” (See Eftink: col. 3, lines 45-59 where duplicate data are eliminated).

### ***References***

#### **6.1.** The prior art made of record

A. U.S. Patent Application 2003/0182296

B. U.S. Patent Number 6,370,547

#### **6.2.** The prior art made of record and not relied upon is considered pertinent to

Applicant's disclosure.

C. U.S. Patent Number 6,556,987

### ***Contact Information***

**7.** Any inquiry concerning this communication or earlier communications from the Examiner should be directed to KUEN S. LU whose telephone number is (571)-272-



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4114. The examiner can normally be reached on Monday-Friday (8: 00 am-5: 00 pm). If attempts to reach the examiner by telephone pre unsuccessful, the examiner's Supervisor, Pierre Vital can be reached on (571)-272-4215. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for Page 13 Published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should You have questions on access to the Private PAIR system; contact the Electronic Business Center (EBC) at 866-217-9197 (toll free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, please call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KUEN S. LU /Kuen S Lu/

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Primary Patent Examiner

January 30, 2009